

2123

Patent
706316-1019

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Beausoleil, W.F. et al.

Application No.: 09/656,541

Filed: September 6, 2000

For: High Speed Software Driven Emulator
 Comprised Of A Plurality of Emulation
 Processors With A Method To Allow High
 Speed Bulk Read/Write Operation
 Synchronous DRAM While Refreshing
 Memory

Group Art Unit: 2123

Examiner: Not Yet Assigned

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TRANSMITTAL LETTER

Assistant Commissioner
 For Patents
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Sir:

Enclosed for filing in the above-identified application is the following:

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- ☒ Revocation of Power of Attorney or Authorization of Agent
- ☒ Power of Attorney or Authorization of Agent
- ☒ Statement Under 37 CFR 3.73(b)

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 (37 C.F.R. §1.8a)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as First Class Mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

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706316-1019

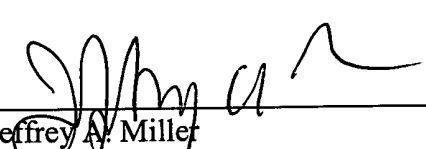
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Deposit Account No. 150665 for any fees that may be associated with this communication.

Respectfully submitted,

LYON & LYON LLP

Dated: October 17, 2002

By: _____


Jeffrey A. Miller
Reg. No. 35,287

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**REVOCATION OF POWER OF
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Application Number	09/656,541
Filing Date	September 6, 2000
First Named Inventor	Beausoleil, W.F. et al.
Group Art Unit	2123
Examiner Name	Not Yet Assigned
Attorney Docket Number	706316-1019

I hereby revoke all previous powers of attorney or authorizations of agent given in the above-identified application:

☒ A Power of Attorney or Authorization of Agent is submitted herewith.

OR

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☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

SIGNATURE of Applicant or Assignee of Record

Name

Peter Chen/Vice President Of Intellectual Property, Assoc. General Counsel

Signature

Peter Chen

Date

OCT. 16, 2002

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

Application Number	09/656,541
Filing Date	September 6, 2000
First Named Inventor	Beausoleil, W.F. et al.
Group Art Unit	2123
Examiner Name	Not Yet Assigned
Attorney Docket Number	706316-1019

I hereby appoint:

☒ Practitioner at Customer Number

34313



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PATENT TRADEMARK OFFICE

OR

☐ Practitioner(s) named below:

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☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

SIGNATURE of Applicant or Assignee of Record

Name

Peter Chen, Esq./Vice President Of Intellectual Property, Assoc. General Counsel

Signature

Date

Oct. 16, 2002

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

3 *Total of _____ forms are submitted.



STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Quickturn Design Systems, Inc.

Application No./Patent Nos.: 09/656,541 Filed/Issue Dates: September 6, 2000

Entitled: High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors With a Method To Allow High Speed Bulk Read/Write Operation Synchronous DRAM While Refreshing Memory

QUICKTURN DESIGN SYSTEMS, INC. a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.
The extent (by, percentage) of its ownership interest is _____%

in the patent application/patent identified above by virtue of either:

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel __, Frame __ or for which a copy thereof is attached.

OR

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: William F. Beausoleil, Brian Cook, Tak-Kwong Ng; Helmut Roth; Peter Tannenbaum, Lawrence A. Thomas and Norton J. Tomassetti

To: International Business Machines Corporation

The document was recorded in the United States Patent and Trademark Office at Reel : 011148, Frame 0165 or for which a copy thereof is attached.

2. From: International Business Machines Corporation To Cadence Design Systems, Inc. A copy of a document evidencing this assignment is being recorded herewith . A copy of this document is attached as Exhibit 1.
3. From: Cadence Design Systems, Inc. To: Quickturn Design Systems, Inc. A copy of a document evidencing this assignment is being recorded herewith . A copy of this document is attached as Exhibit 2.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Oct. 16, 2002
Date

Peter Chen, Esq.

Typed or printed name

P Chen

Signature

Vice President Of Intellectual Property, Assoc. General Counsel
Title

1

NOTICE OF PATENT ASSIGNMENT

This **NOTICE OF PATENT ASSIGNMENT** (the "Notice") is executed as of the date below, by **INTERNATIONAL BUSINESS MACHINES CORPORATION**, a New York corporation ("IBM").

WHEREAS, IBM has entered into a "Patent Assignment Agreement" (the "Agreement") with **CADENCE DESIGN SYSTEMS, INC.**, a Delaware corporation ("CADENCE"), dated February 27, 2002 ("Effective Date"), pursuant to which IBM has agreed to, among other things, assign to CADENCE certain United States patents.

WHEREAS, IBM and CADENCE wish to evidence the assignment of such patent rights made in the Agreement with this document.

NOW, THEREFORE, for good and valuable consideration, IBM agrees as follows:

**ARTICLE I
IBM PATENTS**

"IBM Patents" shall mean the patent applications listed in Attachment A.

**ARTICLE II
ASSIGNMENTS**

Effective on the Effective Date, and subject to the terms and conditions of the Agreement, including certain reserved rights, IBM has assigned, transferred and conveyed to CADENCE all of IBM's right, title and interest in the IBM Patents.

IN WITNESS WHEREOF, IBM has caused this Notice to be executed.

INTERNATIONAL BUSINESS MACHINES CORPORATION

By: 

Gerald Rosenthal

Vice President, Intellectual Property and Licensing

Date: March 8, 2002

ASSIGNMENT OF PATENT APPLICATIONS

Whereas, CADENCE DESIGN SYSTEMS, INC., a corporation organized and existing under and by virtue of the laws of the Delaware and having its place of business at 2655 Seely Avenue, San Jose, California 94134 ("CADENCE"), owns of all right, title and interest in the inventions claimed and/or disclosed in following United States Patent Applications ("the Patent Applications"):

Patent Application Number	Date Patent Application Filed	Inventors	Title
09/655,596	09-06-00	Beausoleil, W.F., et al	High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with a Method to Allow Memory Read/Writes Without Interrupting the Emulation
09/656,541	09-06-00	Beausoleil, W.F., et al	High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with a Method to High Speed Bulk Read/Write Operation Synchronous DRAM While Refreshing the Memory
09/193,733	11-17-98	Ruedinger, J.	Algorithm to Separate Clock Domains for Emulation Purposes
09/523,053	03-10-00	Ruedinger, J., et al	Methods to Improve Concurrent Behavior Modeling with Emulation
09/656,146	09-06-00	Beausoleil, W.F., et al	High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with

			Improved Multiplexed Data Memory
09/373,125	08-12-99	Beausoleil, W.F., et al	Clustered Processors in an Emulation Engine
09/655,595	09/06/00	Beausoleil, W.F., et al	High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with an Improved Board-to-Board Interconnection Cable
09/656,147	09/06/00	Beausoleil, W.F., et al	High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with an Improved Maintenance Bus that Streams Data
09/796,055	02-28-00	Beausoleil, W.F., et al	High Bandwidth 3D Memory Packaging Technique
09/522,354	03-09-00	Musselman, R., et al	Non-synchronous Hardware Emulator

Whereas QUICKTURN DESIGN SYSTEMS, INC., a corporation organized and existing under and by virtue of the laws of the Delaware and having its place of business at 2655 Seely Avenue, San Jose, California 94134 ("QUICKTURN"), is desirous of acquiring the entire right, title and interest in the inventions claimed and/or disclosed in the Patent Applications;

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, CADENCE hereby sells, assigns, transfers and sets over unto QUICKTURN, its successors and assigns, the full and exclusive right, title and interest to the inventions claimed and/or disclosed in the Patent Applications and to all Letters Patent or application or similar legal protection, not only in the United States and its territorial possessions, but in all countries foreign thereto to be obtained for the inventions claimed and/or disclosed in the Patent Applications, and to any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in the United States or a foreign country for the full term or terms for which the same may be granted, including all priority rights under the International Convention; the Patents to be held and enjoyed by QUICKTURN for its own use and behalf, and for QUICKTURN'S legal

representatives and assigns, to the full end of the term for which any Letters Patents are granted, as fully and entirely as the same would have been held by CADENCE had this assignment and sale not been made. CADENCE hereby authorizes and requests the United States Commissioner of Patents and Trademarks and any officials of foreign countries whose duty it is to issue patents or any legal equivalent thereof to QUICKTURN, its successors and assigns, in accordance with this Assignment.

Executed this 22nd day of April, 2002, at
San Jose, CA

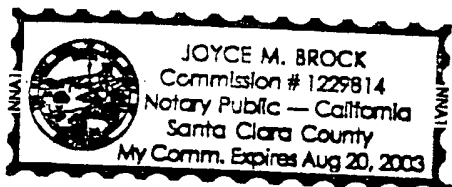
R.L. Smith McKeithen
R.L. Smith McKeithen
Secretary, CADENCE DESIGN SYSTEMS, INC.

STATE OF CALIFORNIA)
) ss

COUNTY OF SANTA CLARA)

On 4/22/02 before me, Joyce M. Brock, personally appeared
R.L. Smith McKeithen ☒ personally known to me - OR - ☐ proved to me on the basis
of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within
instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~
authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or
the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Joyce M. Brock
Notary Public in and for said County and State